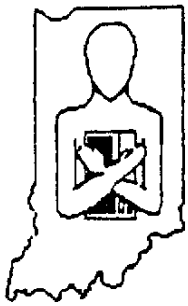

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October 1997 The HUGgers Newsletter Volume 16 Number 1

Officer's Corner

There are several items that need to be mentioned. First of all the club has a new President. Dan Eicher graciously offered to take on that office for the coming year. Also, since the newsletter has been published somewhat erratically over the spring and summer, the subject of dues has not been addressed according to schedule. Therefore this is the first notice for 1997-98 dues. Please send renewals to our P.O. Box. Thanks.

Our next meeting will be held at Dan Eicher's residence this coming Sunday, rather than our usual location at St. Ann's Church. A map is included showing how to get there.

Other items of interest - there will be a Chicago TI Faire this year. It will be the 15th Faire for the Chicago user's group and will be held on November 8, at the Evanston, Ill. Public Library. See the enclosed article; And there is more information about the West Fest TI Faire which will be held in Lubbock, Texas on February 14. This should be very interesting since part of the Faire will be at Texas Instruments facilities there.

- BCP

H.U.G. OFFICERS		
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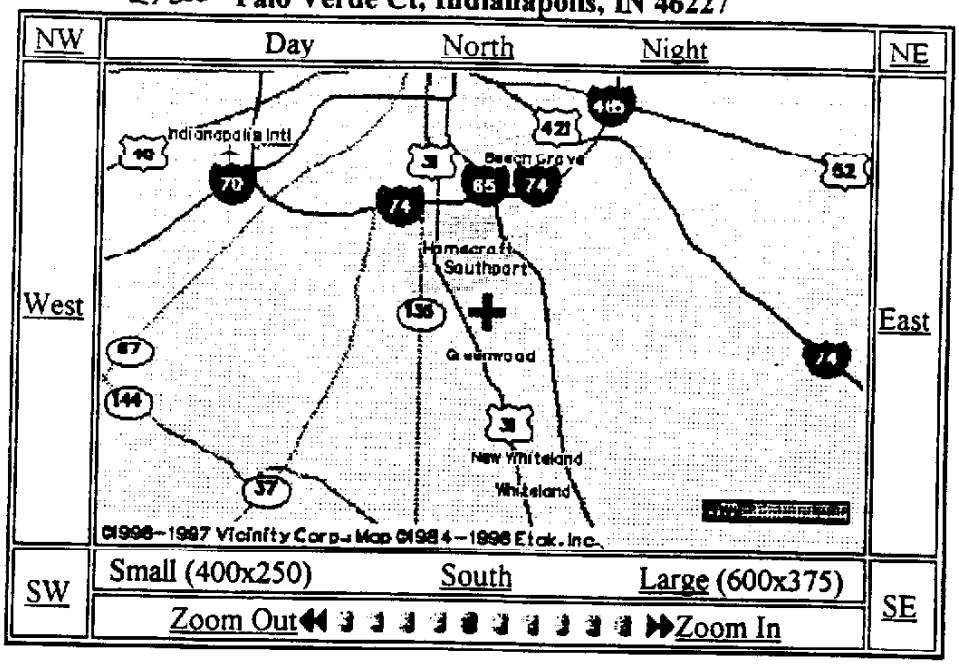
Directions to Dan H. Eicher's

2720 **Palo Verde Ct, Indianapolis, IN 46227**



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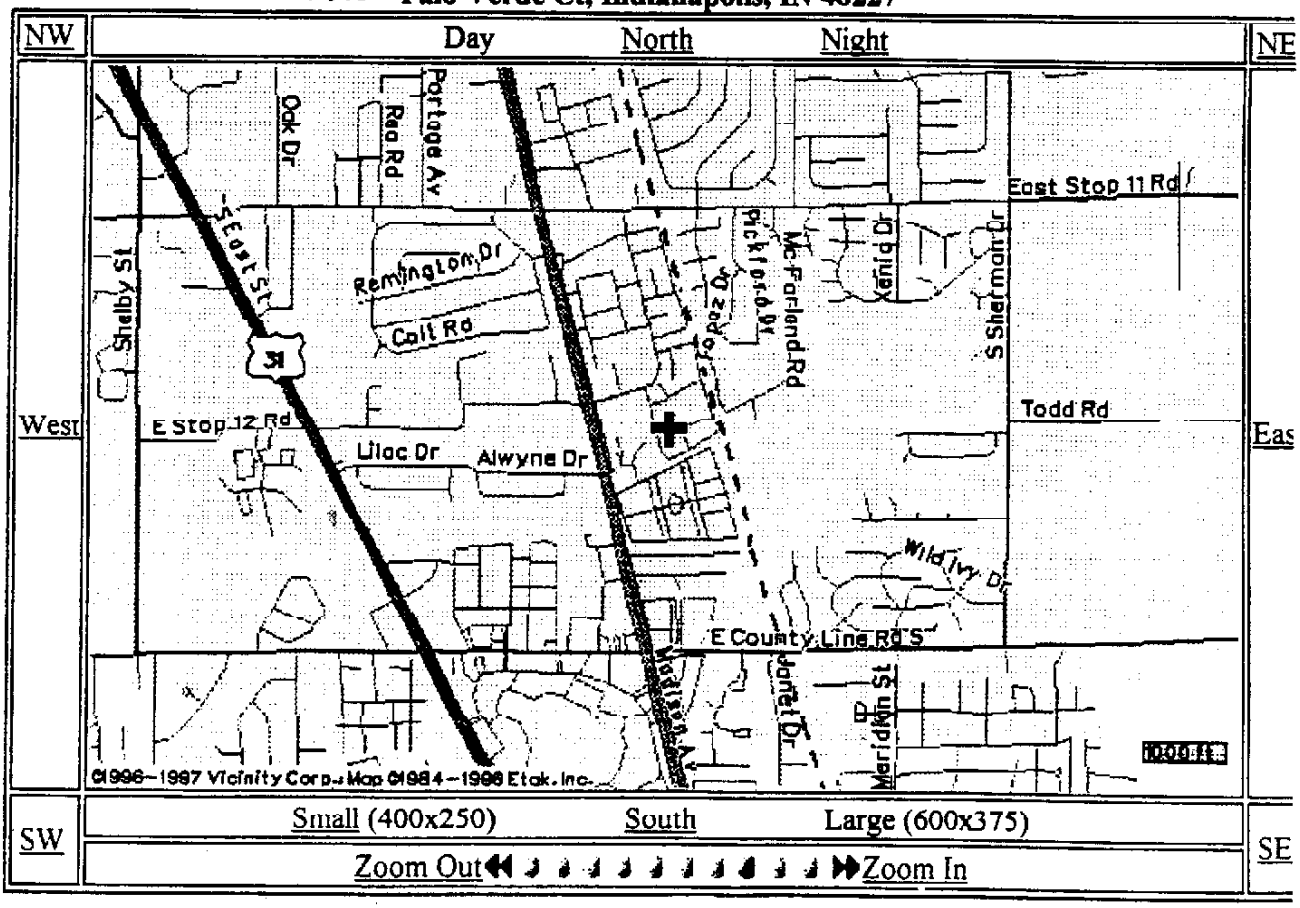


THE CHICAGO TI USERS GROUP

presents the

15th Annual Chicago TI International World Faire

supporting TI 994A and 9640

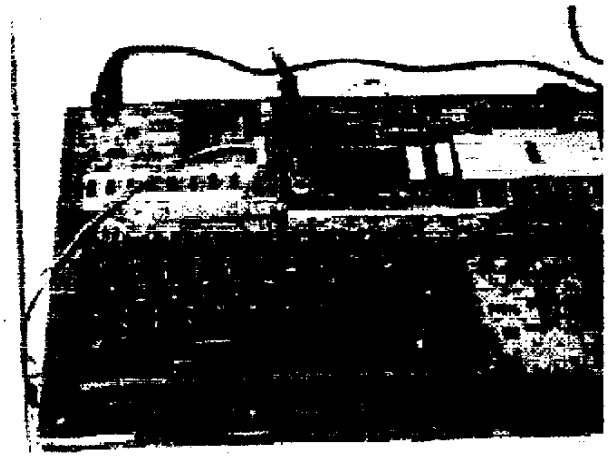
November 8, 1997

EVANSTON PUBLIC LIBRARY
Evanston, Illinois
(corner Church & Orrington)
9:30 a.m. - 4:00 p.m.
Vendors-demonstrations-Seminars-User Groups
door prize drawings

for further information contact: **Hal Shanafield** (847)864-8644

TI99/4A COMPUTER REPAIR

By *Gary W. Cox*



With some TI99/4a's more than 15 years old they are bound to start having problems. In this article I will discuss options on repairing your 4a and I will discuss many ways to do repairs yourself.

The best and easiest way for repairs is to send the equipment to one of the following repair centers:

Cecure Electronics Inc.
c/o Don Walden
P.O. Box 132
Muskego, WI 53150
1-800-959-9640 (orders only!!)
(414) 679-4343
BBS (414) 422-9669

Cecure Electronics is a Texas Instruments and Myarc Authorized Repair Center!

Corcomp Products:

99 Computer Repair
c/o David Lynch
2101 W. Crescent Ave.
Unit A
Anaheim, CA 92801
(714) 539-4834

Before you read on any further let me say that any of the following procedures that I discuss you do at your own risk! While many repairs are easy if you are not very electronically oriented it may be best to

send your equipment to one of the above repair facilities rather than attempt a repair yourself.

COMMON PROBLEMS:

Many problems associated with the TI99/4a are caused by dirty contacts on the module port. Some of the symptoms of dirty contacts include having trouble going into extended BASIC or having frequent lockups while in Extended BASIC or another cartridge.

The problem with the console module port is that the contacts become corroded and need cleaning. One way to clean the module port is to use a smoking pipe cleaner and bend the end into a circle. Then dip the end with the circle into a alcohol based cleaning solution such as audio and video head cleaner or TV tuner cleaner. Make sure the solution does not leave any residue behind and that the cleaner does not harm plastic! Then insert the rounded end into the module port connector and pull it straight out, DO NOT move it side to side or it will bend the contacts in the module port. After removing the rounded end move it over a little and insert it again until you have done the entire module port. You can also remove the module port connector by disassembling the computer and then disassembling the module port connector and clean it. However, you may wish to just purchase a new module port connector and replace your old one. L.L. Conner Enterprise (see vendor listing) sells the 90 degree module port assembly for just $8.

Purchasing a module expander device that fits permanently in the module port will help prevent the wear and tear on the module port connector itself as cartridges can plug into the module expander rather than in and out of the module port. Many such devices are available including many which can contain the contents of multiple cartridges.

DISCOVERING THE PROCESS OF ELIMINATION:

In repairing your own equipment the repairer (that's you) must follow a procedure to determine what part of the system is defective. This is done by a process of elimination. For example, if you turn on your system and you do not get a display check and see if the monitor is on or if your monitor is a TV check and see if the TV is tuned to the correct station. Check the modulator and see if the modulator switch is in the correct position. This may sound silly but as a computer repair technician myself I find many problems are simply something setup incorrectly! Check the obvious first! Then if your 4a will still not power up try the system at the basic level by disconnecting the console from the PEB and remove any cartridge that may be inserted. If the console is still dead it is either the computer, modulator, external power supply or TV/monitor. If you are using a TV check and see if the TV works on other stations. It the TV/monitor works then it is either the computer, modulator or power supply. If you have a black and silver 4a you can see a red light on the front of the console which usually indicates that power is fine. So now you can either have an internal computer problem or the video modulator is bad and since video modulators go out quite often that would be a good item to try replacing. If replacing the modulator does not solve the problem then the problem is something in the console which could be the internal power supply or system board. The console internal power supply is replaceable but the system board will require that the computer be sent to Texas Instruments for repair. Now it is always good to confirm your diagnosis by having another computer that you can hook up in place of your console to confirm that your problem is actually in the console itself thus testing all other parts (IE TV/MONITOR, video modulator, external power supply etc...). If you system works after testing another console then the problem is definitely inside of the console.

This process of elimination works on the rest of the equipment too. If something isn't working in the PEB try stripping your system down to the basic unit and start testing from there. For example, will your PEB work correctly with another console as a problem which appears to

be something in the PEB can be the console? You could try taking out all cards in the PEB except for the flex cable interface card and see if the flex cable interface card light will come on when the console is turned on. If the flex cable interface card light comes on the flex cable interface is probably good so try inserting an additional PEB card card and see if it works. Be advised that you should ALWAYS HAVE POWER OFF to the PEB when changing a card and Texas Instruments recommends waiting 2 minutes after turning power off before changing a card. Keep inserting cards until the problem occurs again and then you have your guess at what is bad and you now need to borrow a like part to confirm your diagnoses.

Note that at the end of this article I will give a list of where to purchase some of the parts that you need for simple repairs.

MORE PROBLEMS:

Getting back to actual problems a very common problem with the TI99/4a is the video modulator. If you turn on your 4a and do not get a picture or do not get sound it could be the modulator. The easiest thing to do is just try another modulator. This part costs from $5 to $20.

Another problem is with the keys as when the contacts inside of them get dirty they will double strike or not work at all. The easiest thing to do here is to purchase the keys on a keypad and replace the keyboard unit itself. This unit can be replaced by removing the screws on the back of the console and which will allow access to the keypad itself. The keypad is held in by several screws and then a ribbon cable connects it to the system board which can be unplugged. Just unplug the ribbon cable (this is a little tricky) and pull out the keypad and replace the keypad with a new one. Note that it does not matter if you replace a black keyboard with a grey one as the only difference is the color of the keys.

If you do not have access to a keyboard unit you could try cleaning the one that you have. On some of the keyboards the keys can be removed and two contacts can be seen inside of each key which tap together to make contact. Spray some NON CONDUCTIVE cleaner (such as Blue Shower cleaner) inside or TV tuner cleaner (allow to dry before placing the key back on) and be sure the cleaner does not harm plastic! You may only need to remove the key or keys that you are having trouble with. Be sure to turn the console over to allow any access to drip out and be sure it is cleaner which will air dry (alcohol based cleaner).

If you are having trouble reading disks such as having disk read errors the heads on your drive may be dirty. However, be sure you are trying to read a compatible disk first. For example, a single sided / single density drive will only read the first side of a disk formatted as double sided / single density and a disk formatted as double density will not read at all in a single density drive. Note when I speak of formatting on the TI99/4a it is usually referred to as "initializing" a disk instead of formatting a disk. So if you insert a disk and you get disk read errors you could have a dirty head. Just purchase a disk head cleaning kit and try cleaning it. Be sure you purchase a head cleaning kit that uses liquid (do not use dry cleaning kits!) and be sure not to run the cleaning disk in your drive dry. Also ONLY use your cleaning disk for the

recommended amount of times as over use can cause the head to stick to the cleaning media and damage the head. Also only use a cleaning disk when you are having problems as if it "ain't broke don't fix it". Excessive use of cleaning disks can wear out a disk drive's head. If this doesn't fix your problem the disk could be bad so try other disks. The disk could have been used in a system which it's drive head is out of alignment or you drive head could be out of alignment of which these problems is best solved by a computer technician.

WHERE TO FIND PARTS:

So now where do you find the parts that you need? At one time Radio Shack carried video modulators, keyboards (keys on the keypad) and internal console power supplies. Each of these items said somewhere on the package that it was once for the TI99/4a. Most Radio Shack's are out of these items but you may find one somewhere that still has one of these items in stock.

One place to get replacement keyboards (the keys on a keypad) is All Electronics, their catalog number for the item is KP-48S and it sells for $2 each. Their phone number is 1-800-826-5432 or (818) 904-0524. At one time they had TI video modulators but are currently out of stock of those items and are not expecting any more.

Another good place for parts is L.L Conner Enterprise at 1521 Ferry St. Lafayette, IN 47901, phone number (317) 742-8146. They carry the cartridge port L connector (this is what the cartridges plug into) for $8. They have video modulators for $15 each, external power supplies for $10 and even various chips necessary for component level repair of TI boards.

Other places to try for various parts is Joy Electronics at 800-527- 7438 (outside Texas) or 800-442-3892 (inside Texas) just to name a few. Also for repairs of Horizon Ram Disks contact Bud Mills of Bud Mills Services at (419) 385-5946.

I would highly recommend that everyone have at least an extra video modulator on hand. Most TI owners have at least one backup system as well since consoles can be purchased used for well under $20. Hamfests are also VERY GOOD for picking up parts and used TI equipment at very very low prices not to mention TI Faires which are held around the country.

DISCLAIMER

This newsletter is brought to you through the efforts of the officers and members of the HOOSIER USERS GROUP. Every member is encouraged to submit articles.

If you have an article you would like to share with the other members mail it to:

Bryant Pedigo
6461 N. Sherman Drive
Indianapolis, IN 46220

Opinions expressed are those of the author and not necessarily those of the HOOSIER USERS GROUP.

FEST WEST '98

Fest West lines up hotels, TI facility

Plans for Fest West '98 in Lubbock are being finalized, according to event organizer Tom Wills of the Southwest 99ers User Group.

Wills says "at this time we do need to hear from vendors who are interested in setting up a booth. The room for the vendor activities is easily accessible for vendors to move equipment in and out of."

The vendor area will be open from 1 to 6 p.m. Feb. 14.

"Hopefully a shorter time period will be more productive and buyers won't need to be wandering around all day waiting until the end of the day for expected bargains," Wills said.

So far, two vendors have said they will attend.

TWO SITES

The fair will be held at two sites, one of them a TI production facility and the other a hotel. The TI facility was at one time used to produce the TI home computer.

Those who attend the activities at the TI facility, which will be offered at no charge, will have to be abide by a number of restrictions, including:

• No sales of any sort on TI grounds.

• Because of security policies for this type of facility, attendees will not be able to come and go at will. Everyone will have to register in the TI lobby between 8 and 8:30 a.m. An information card and a liability waiver will have to be filled out for each visitor. The activities will end at noon.

• No cameras will be allowed during any of the activities. Arrangements are being made to take "official" pictures which can be made available to those in attendence.

• Except for tours of the facility, those attending will have to remain in the area designated for the Fest West activities.

SCHEDULE OF EVENTS

The activities at the TI production facility will be conducted in the morning. These activities are expected to include tours, speakers, and a mini-museum. Speakers will include TI employees who were instrumental in the development of the TI99/4A. TI officials are contacting members of the development team to have them present at the activities.

From 1 to 6 p.m., the vendor portion of Fest West will take place at the Sheraton Four Points Hotel. As part of FW98, there will also be a hospitality room set up in the hotel which will be open from 1 to 10 p.m.

DRIVING DISTANCES

Some distances to Lubbock include:

City	Distance in miles
Tucson, AZ	668
Chicago, IL	1172
Atlanta, GA	1309
Los Angeles, CA	1168
Denver, CO	500
Cleveland, OH	1378
Seattle, WA	1767

Fest West will have two official

FEST WEST '98

Continued from page 51

hotels. The first is the Sheraton Four Points Hotel. There is a block of 100 rooms set aside for Fest West attendees. Prices are as follows:

Single/double room (1 or 2 people) $54 with an additional $10 for each extra person up to 4 persons per room. Taxes are extra. The rooms will be set aside for Fest West until 30 days before the event. Mention Texas Instruments Computer Fair for the special rates when making reservations.

The second hotel is the Koko Inn. A block of 100 rooms has been set aside, with another possible 100 rooms at the Koko Inn's sister hotel, the Villa Inn. Each room has either one king-sized bed or two queen-sized beds. The rates for the Koko Inn are $44 a night for up to four people per room. The block of rooms will be held until two weeks before Fest West. Call 800-448-3525 or 806-747-3525 to make reservations. Mention Fest West '98 for the special rates when making reservations.

For tourism information, call the Convention and Tourism Bureau of Lubbock at 1-800-692-4035.

TRANSPORTATION

Lubbock International Airport is served by five major airlines — American Eagle, ASA The Delta Connection, Continental, Southwest, and United Express.

Lubbock has 12 rental car companies to accommodate visitors. Rental agencies at the airport incluce: Advantage, Avis, Hertz, and National. Off-site rental agencies include: Advantage, Agency, Budget, Discount, Enterprise, Sears, Snappy, Thrifty, and Trusty.

Agencies offering van rental are Advantage, Discount, Thrifty, and Trusty.

All major convention hotels offer free airport shuttle service.

USER NOTES

Hidden powers of MIDI Master

There are hidden powers in MIDI-Master that we've just discovered. It started with a question from Richard Bell, who was testing our new version 2.5Z. He has a very new and advanced Casio keyboard, and discovered from its manual that it will accept and play MIDI notes a full octave below its own keys. The lowest key on the keyboard carresponds with the note 0C in MIDI-Master's SNF notation. He asked whether there could be a way to send that lower octave from MIDI-Master. There is!

According to its docs, MIDI-Master handles notes from 0C through 5C. By examining the source code in its compiler, we learned that it doesn't check the octave character for numeric values. It simply takes the ASCII value and performs integer math operations on it. It looked as though if we used the next lower ASCII character (/) in place of the zero, that we could compile a whole octave below 0C. This works!

From - Sun Oct 12 15:34:43 1997
From: ttesch@juno.com
To: ti99@TheRiver.com
Subject: TI99: File Transfer Protocol Info

A while back, someone asked for docs on the TIFILES header.. Well, here we go...

The TIFILES header is used by the TI / Geneve to recreate a file and its type. This header allows us to transfer files from TI to TI, TI to Geneve, TI to IBM, or IBM to TI/Geneve all the while keeping the file intact and its format correct.

How is it done? Well, the TIFILES header, used first in FasTerm, is set up as follows:

```
HEADER          BYTE >07          start of header, (MXT Ymodem uses >08)
TIFILES         TEXT "TIFILES"
```

The next 8 bytes of the record are taken from the disk DSR's Addition infomation structure. This data is read/written using DSR Opcodes >14, >15, >24, and >25; floppy read/write and hard drive read/write. It is structured as follows:

```
FILESECTORS DATA xxxx         total sectors
STATUSFLAGS BYTE xx           status, type of file,etc
RECPERSECTOR      BYTE xx           records per sector
BYTESLASTSEC      BYTE xx           bytes used in last sector (pgm image)
LOGRECLEN   BYTE xx           logical rec length
RECSECUSED  DATA xxxx         records or sectors used
```

This is all that is required to properly send/receive files. However, certain extensions to the format were made. Mass Transfer first modified this record so make multiple file transfers possible. How?

If the byte at position 26 was not equal to zero, MXT new that additional files were being sent. A "cheap" Ymodem, it allows TI/Geneve users to transfer multiple files without intervention.

Port expands on this idea by including a flag at offset 28. If this flag is set to >FFFF, the following 8 words of data from position 30 through 37 are used to transfer the date and time stamp information for the transferred file. In this manner Port preserves date/time stamps.

The header is sent either as a 128 byte block or a 1024 byte block depending upon which protocol is in use.

HOOSIER USERS GROUP
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Indianapolis, IN 46206-2222

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Correction Requested

TIME DATED
October 19, 1997
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APPLICATION FOR MEMBERSHIP

Below you will find an application for membership to the Hoosier Users Group. Active memberships entitles you to the Newsletter, up and downloads on the HUGbbs, attendance and voting rights at regular club meetings, access to the HUGger Library of Programs, special club activities and special guest speakers for one year.

Make check or money order payable to Hoogier Users Group. Send completed application to:

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